

CITY OF MADERA

STORM WATER QUALITY MANAGEMENT PROGRAM

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Section 1 Introduction

Background

In 1972, the Federal Water Pollution Control Act (also referred to as the Clean Water Act [CWA]) was amended to provide that the discharge of pollutants to waters of the United States from any point source is unlawful unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. The 1987 amendments to the CWA added §402(p), which established a framework for regulating storm water discharges under the NPDES Program.

Phase I of the U.S. Environmental Protection Agency's (EPA) storm water program was promulgated in 1990 under the CWA. Phase I relies on National Pollutant Discharge Elimination System (NPDES) permit coverage to address storm water runoff from: (1) "medium" and "large" municipal separate storm drain systems (MS4s) generally serving populations of 100,000 or greater, (2) construction activity disturbing 5 acres of land or greater, and (3) ten categories of industrial activity.

On December 8, 1999, EPA promulgated regulations known as the Storm Water Phase II Final Rule. The Phase II program expanded the Phase I program by requiring additional operators of MS4s in urbanized areas serving populations greater than 25,000 and less than 100,000 and operators of small construction sites disturbing 1 acre or more, through the use of NPDES permits, to implement programs and practices to control polluted storm water runoff.

Purpose of the Storm Water Management Program

The purpose of the City's Storm Water Quality Management Program (SWQMP) is to implement and enforce a series of management practices, referred to herein as "Best Management Practices" (BMPs). These BMPs are designed to reduce the discharge of pollutants from the municipal separate storm drain systems to the "maximum extent practicable," to protect water quality, and to satisfy the appropriate water quality requirements of the Clean Water Act. The achievement of these objectives will be gauged using a series of Measurable Goals, which also are contained in the SWQMP.

The BMPs are grouped under the following six "Minimum Control Measures", which are required under the Phase II regulations:

1. Public Participation/Involvement
2. Public Education and Outreach
3. Construction Site Runoff Control
4. Illicit Discharge Detection and Elimination
5. Pollution Prevention/Good Housekeeping
6. Post-Construction Runoff Control

Content of the City of Madera's Storm Water Quality Management Program

The City's SWQMP describes the framework under which the City will work to accomplish the objectives of the Program. It contains a description and map of the areas to be covered by the NPDES permit for which the Program was prepared. It also describes how the BMPs and Measurable Goals will be applied and enforced within the jurisdictional boundaries of the City. The heart of the SWQMP is the listing of BMPs and Measurable Goals.

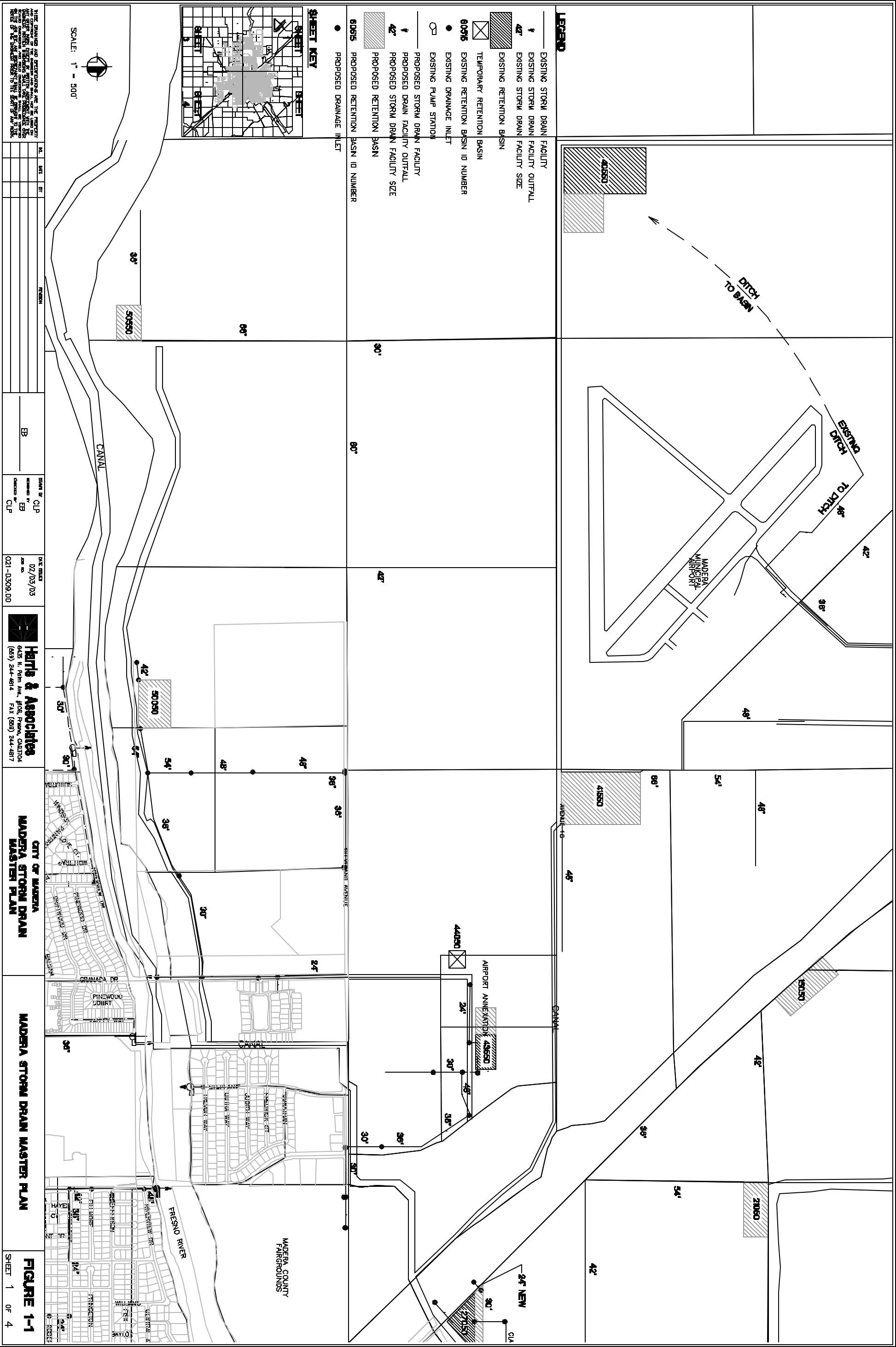
Description of the City of Madera Master Planned Storm Drain System

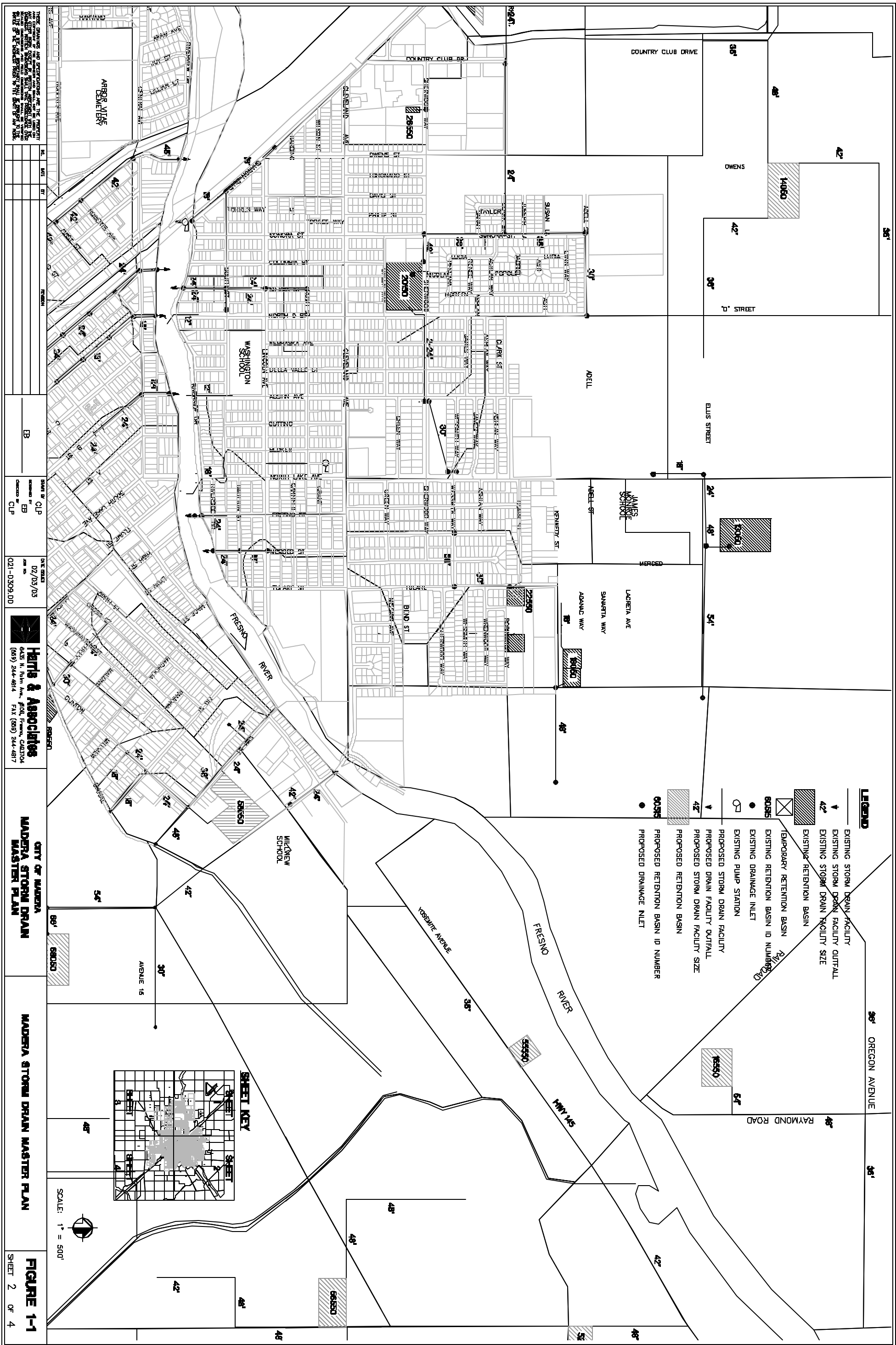
The BMP's developed for and incorporated in this Storm Water Quality Management Plan were tailored to the method of managing storm water runoff specific to the City of Madera. An understanding of Madera's drainage program will provide insight into the BMP's incorporated in this Storm Water Quality Management Plan.

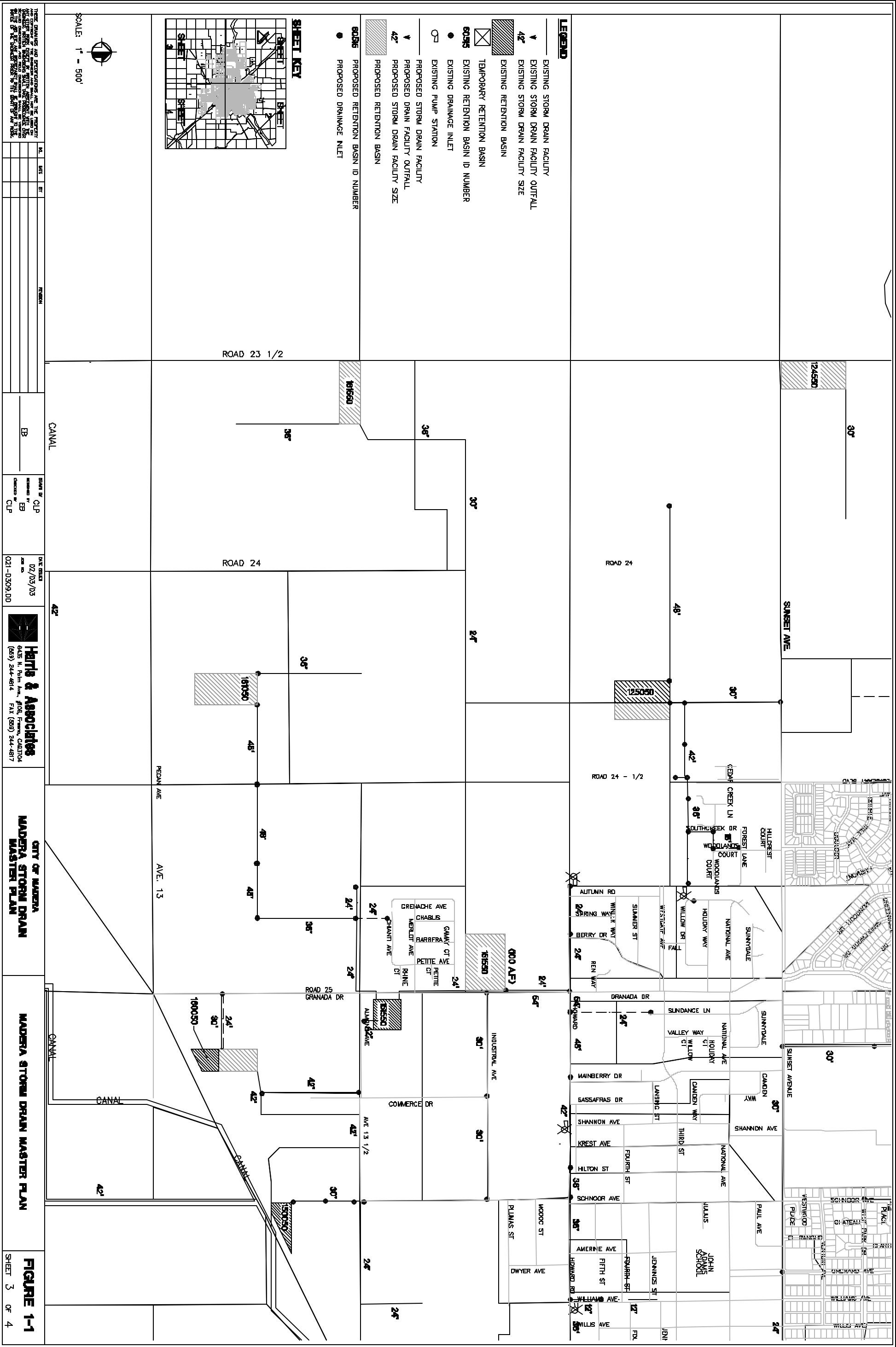
In 1997, The City prepared an update to its Storm Drain Master Plan (Plan) for the area within its Planning Boundary. This boundary was selected to facilitate the provision of drainage facilities and services for areas that may be subsequently annexed to the City. The Master Plan is used for the systematic installation of separate storm drain systems for the conveyance of storm runoff from newly developing areas as well as from the older part of the community. Typically, installations occur in conjunction with development in new areas, and in conjunction with other projects in the older areas.

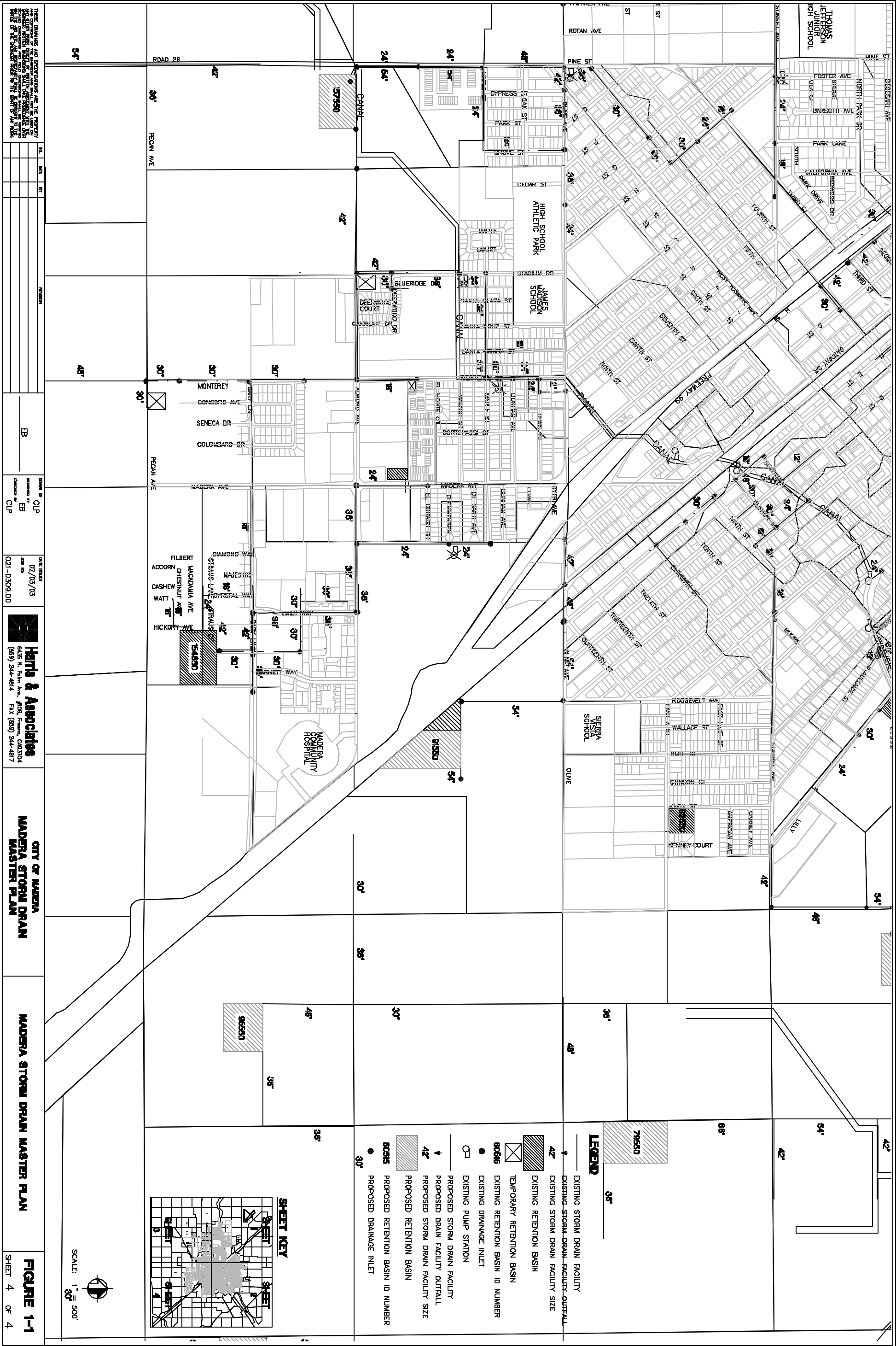
As with most valley cities, Madera's topography is flat, with an absence of natural drainage channels except one, the Fresno River. Because of the lack of significant grade (slope), the predominant method of disposal is by use of retention basins that are excavated below ground level. Some areas, however, drain to the Fresno River or to Madera Irrigation District conveyance facilities. The Fresno River is typically dry, and usually flows only in the wettest years.

Drainage from the urbanized areas of the City is typically directed to street curbs and gutters (concrete) where it is carried to inlets located along the street and into the storm drain pipeline system. No natural channels are used for this primary conveyance. The pipeline system conveys the runoff to disposal facilities listed above. The storm drain pipeline and retention basin system is owned, operated and maintained by the City. A map of the City's Storm Drainage Master Plan is included as *Figure 1-1*.









Section 2 NPDES Phase II Program and Requirements

Description of the Phase II NPDES Program

The Phase II NPDES Program is intended to reduce adverse impacts to water quality and aquatic habitat by instituting the use of controls on the unregulated sources of storm water discharges that have the greatest likelihood of causing continued environmental degradation. The environmental problems associated with discharges from MS4s in urbanized areas and discharges resulting from construction activity are outlined below.

Storm water discharges from MS4s in urbanized areas are a concern because of the concentration of pollutants found in these discharges. Concentrated development in urbanized areas substantially increases impervious surfaces, such as city streets, driveways, parking lots, and sidewalks, on which pollutants from concentrated human activities settle and remain until a storm event washes them into nearby storm drains.

Discharges from MS4s often include wastes and wastewater from non-storm water sources. These dry weather flows from illicit and/or inappropriate discharges and connections to the MS4's enter the system through either direct connections (e.g., wastewater piping either mistakenly or deliberately connected to the storm drains) or indirect connections (e.g., infiltration into the MS4 from cracked sanitary systems, spills collected by drain outlets, or paint or used oil dumped directly into a drain). The untreated discharges include pesticides, fertilizers, oils, litter and sediment, significantly degrading water quality and threatening aquatic, wildlife, and human health.

Runoff from construction sites is a water quality concern because of the effects that sedimentation can have on local storage facilities and waterways. Numerous studies have shown that the amount of sediment transported by storm water runoff from construction sites with no controls is significantly greater than from sites with controls. In addition to sediment, construction activities yield pollutants such as pesticides, petroleum products, construction chemicals, solvents, asphalts, and acids that can contaminate storm water runoff. During storms, construction sites in the Madera area can be the source of sediment laden runoff which can substantially reduce the capacity of storm drain systems designed to safely carry storm runoff to storage facilities or waterways. This can result in flooding of some areas and the accompanying deposit of sediment typically in streets and on private property. Furthermore, sediment laden runoff transported to storm water retention facilities or waterways can result in reduced storage capacity or water conveyance ability.

The Phase II NPDES Program contains the following six program elements, termed "Minimum Control Measures."

1. *Public Participation/Involvement*

Providing opportunities for citizens to participate in program development and implementation, including effectively publicizing public hearings and/or encouraging citizen representatives to attend storm water management program meetings.

2. *Public Education and Outreach*

Distributing educational materials and performing outreach to inform citizens about the impacts

polluted storm water runoff discharges can have on water quality.

3. *Construction Site Runoff Control*

Developing, implementing, and enforcing an erosion and sediment control program for construction activities that disturb 1 or more acres of land (controls could include silt fences and temporary storm water detention ponds).

4. *Illicit Discharge Detection and Elimination*

Developing and implementing a plan to detect and eliminate illicit discharges to the storm drain system. This includes developing a system map, informing the community about hazards associated with illegal discharges and improper disposal of waste, and enforcement measures.

5. *Pollution Prevention/Good Housekeeping*

Developing and implementing a program with the goal of preventing or reducing pollutant runoff from municipal operations. The program must include municipal staff training on pollution prevention measures and techniques, which might include such things as regular street sweeping, reduction in the use of pesticides or street salt, or frequent catch-basin cleaning.

6. *Post-Construction Runoff Control*

Developing, implementing, and enforcing a program to address discharges of post-construction storm water runoff from new development and redevelopment areas. Applicable controls could include preventative actions such as protecting sensitive areas (e.g., wetlands) or the use of structural BMPs such as grassed swales or porous pavement.

Summary of State Phase II General Permit Requirements

General

The EPA delegated to the State Water Resources Control Board (SWRCB) the authority to administer and enforce the Phase II NPDES Program within the State of California. In 2003 the SWRCB adopted a General Permit for storm water discharges from regulated Small MS4s. An “MS4” is defined as a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains): (i) designed or used for collecting and/or conveying storm water; (ii) which is not a combined sewer; and (iii) which is not part of a Publicly Owned Treatment Works (POTW) as defined at Title 40 of the Code of Federal Regulations (CFR) §122.2. The City is included in this definition, along with certain urbanized areas in the County.

A “Small MS4” is further defined as an MS4 within a U.S. Census Bureau defined “urbanized area” that is not a permitted MS4 under the Phase I regulations. This definition of a Small MS4 applies to MS4s operated within cities and counties as well as governmental facilities that have a system of storm drains. This includes such entities as School Districts and Agricultural Districts that administer fairgrounds.

Federal regulations allow two permitting options for storm water discharges (individual permits and general permits). The SWRCB decided to implement a statewide general permit in order to efficiently regulate numerous storm water discharges under a single permit. In certain situations a storm water discharge may be more appropriately and effectively regulated by an individual permit, a region-specific general permit, or by inclusion in an existing Phase I permit. In these situations, the

Regional Water Quality Control Board (RWQCB) Executive Officer will direct the MS4 operator to submit the appropriate application, in lieu of a Notice of Intent to comply with the terms of this General Permit. In these situations, the individual or regional permits will govern, rather than this General Permit.

Entities Subject to the General Permit

The General Permit regulates discharges of storm water from “regulated Small MS4s.” A “regulated Small MS4” is defined as a Small MS4 that discharges to a water of the U.S. or other MS4 regulated by an NPDES permit and is designated in one of the following ways:

1. Automatically designated by U.S. EPA pursuant to 40 CFR §122.32(a)(1) because it is located within an urbanized area defined by the Bureau of the Census (see Attachment 1); or
2. Individually designated by the SWRCB or RWQCB after consideration of the following factors:
 - a. High population density – High population density means an area with greater than 1,000 residents per square mile. Also to be considered in this definition is a high density created by a non-residential population, such as tourists or commuters.
 - b. High growth or growth potential – If an area grew by more than 25% between 1990 and 2000, it is a high growth area. If an area anticipates a growth rate of more than 25% over a 10-year period ending prior to the end of the first permit term, it has high growth potential.
 - c. Significant contributor of pollutants to an interconnected permitted MS4 – A small MS4 is interconnected with a separate permitted MS4, if storm water that has entered the Small MS4 is allowed to flow directly into a permitted MS4. In general, if the Small MS4 discharges more than 10% of its storm water to the permitted MS4, or its discharge makes up more than 10% of the other permitted MS4’s total storm water volume, it is a significant contributor of pollutants to the permitted MS4. In specific cases, the MS4s involved, or third parties, may show that the 10% threshold is inappropriate for the MS4 in question.
 - d. Discharge to sensitive water bodies – Sensitive water bodies are receiving waters, including groundwater, which are a priority to protect. They include the following:
 - Those listed as providing or known to provide habitat for threatened or endangered species;?
 - Those used for recreation that are subject to beach closings or health warnings; or
 - Those listed as impaired pursuant to CWA §303(d) due to constituents of concern in urban runoff (these include BOD, sediment, pathogens, petroleum hydrocarbons, heavy metals, floatables, polycyclic aromatic hydrocarbons (PAHs), trash, and other constituents that are found in the MS4 discharge). Additional criteria to qualify as a sensitive water body may exist and may be determined by the SWRCB or RWQCB on a case-by-case basis along with the MS4’s designation justification.
 - e. Significant contributor of pollutants to waters of the United States – Specific conditions presented by the MS4 may lead to significant pollutant loading to waters of the U.S. that are otherwise unregulated or inadequately regulated.

These factors are considered when the SWRCB evaluates whether a Small MS4 should be required to implement a storm water pollutant prevention program that meets the provisions of the General Permit. An MS4 and the population that it serves need not meet all of the factors to be designated. These factors were chosen to target MS4s that in general have the potential to impact water quality due to conditions influencing discharges into their system or due to where they discharge. The City was automatically designated by the EPA (No. 1 above) as subject to the NPDES permit requirements.

The definition of a Small MS4 further provided at §122.26(b)(16) includes systems of storm water conveyances owned or operated by the United States, a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity. This term includes systems similar to separate storm drain systems in municipalities, such as systems at military bases, large hospital or prison complexes, and highways and other thoroughfares. This term does not include separate storm drains in very discrete areas, such as individual buildings.

There is a wide array of governmental facilities with varying storm water conveyance structures. Some of the structures clearly form a system of conveyances similar to those in municipalities while others do not. In general, storm water structures serving public campuses (including universities, community colleges, primary schools, and other publicly owned learning institutions with campuses), military bases, and prison and hospital complexes are Small MS4s that are similar to traditional storm water systems that serve cities and counties. Those Small MS4s within or adjacent to a regulated Small, Medium, or Large MS4s are themselves regulated Small MS4s and are subject to an MS4 storm water permit.

There may be instances where a governmental facility does not have a storm drain system that is similar to a traditional MS4 but is a significant source of pollutants and may be designated as a regulated Small MS4 by §122.26(a)(v).

While discharges from Small MS4s serving a city or county within the permit area of a permitted city or county will be regulated under the respective city or county permit, discharges from Small MS4s serving other governmental facilities (i.e. facilities owned and operated by the federal or state government) do not fall under the jurisdiction of the city or county and therefore may need to be permitted separately. Additionally, similar facilities operated privately are not subject to this permit because, by definition, only public entities operate Small MS4s, and the city or county has legal authority over the private entity.

Supplemental Provisions

The General Permit requires high growth communities to comply with additional requirements. The permit defines an area a high growth area if the population grew more than 25% between 1990 and 2000. The City of Madera grew by approximately 47% according to the latest census data available. Therefore, the City's SWQMP must include specific design standards and comply with water quality standards that are outlined in Attachment 4.

Notification Requirements

As required by 40 CFR §122.33(c)(1) and the Porter-Cologne Water Quality Control Act (Porter-Cologne) §13376, regulated Small MS4s automatically designated because they are within an urbanized area must submit to the appropriate RWQCB by March 10, 2003, a Notice of Intent (NOI) to comply with the terms of the General Permit, a Storm Water Management Program (SWQMP), and a fee.

Regulated Small MS4s that fail to obtain coverage under this General Permit will be in violation of the CWA and the Porter-Cologne Water Quality Control Act.

A regulated Small MS4 will be considered to be permitted once the NOI has been received by the RWQCB. The MS4 shall then begin implementing its SWQMP. However, the RWQCB Executive

Officer may require refinement upon review of the SWQMP, if it appears to be an inadequate tool to achieve compliance with this General Permit. The Permittee may also revise its own SWQMP, but must propose such changes to the RWQCB.

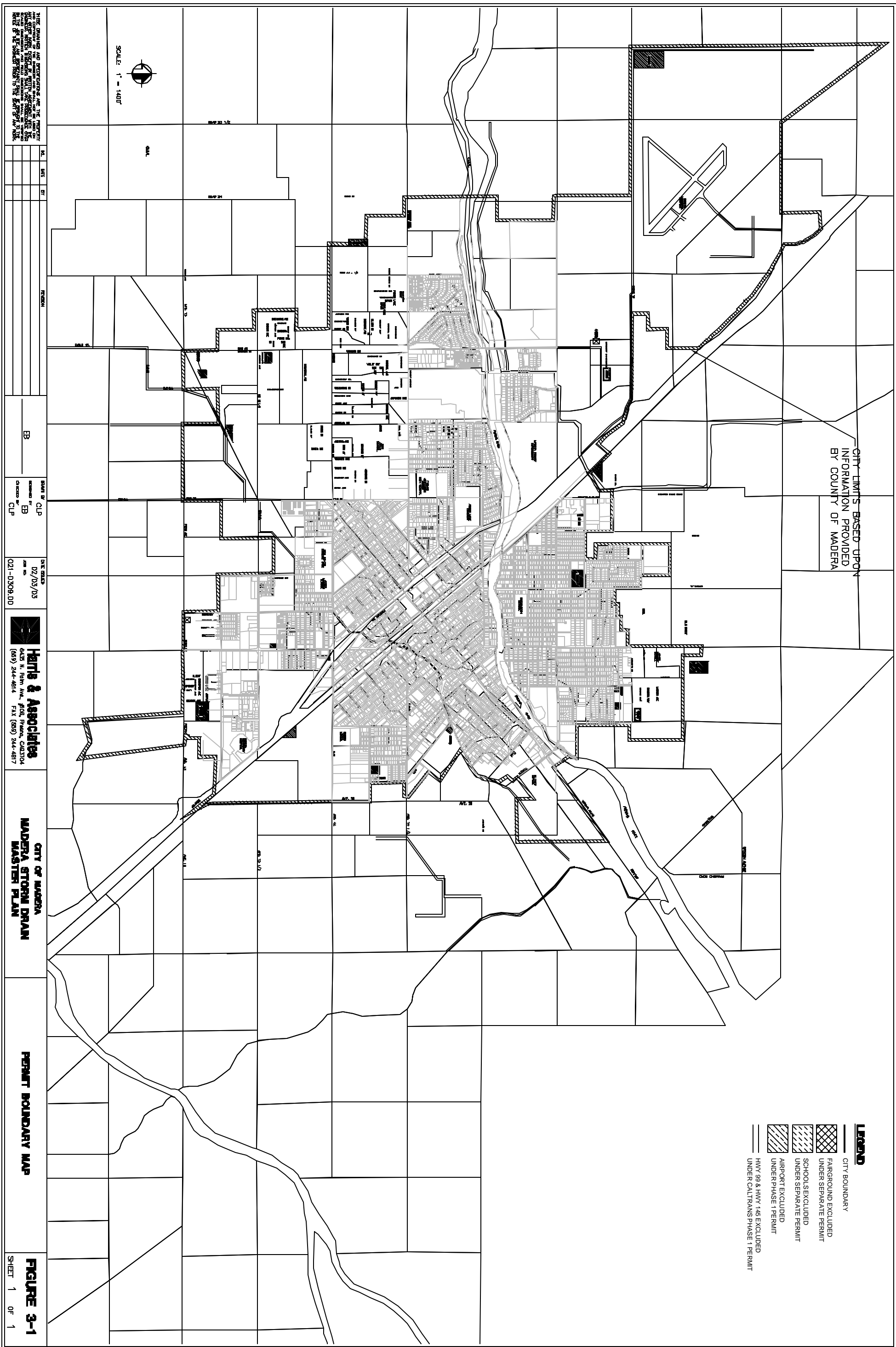
Section 3

City Permit Boundary

The boundary of the area within which the SWQMP will be carried out is as follows:

- The SWQMP will be carried out throughout the area bounded by the City's legal jurisdictional boundary, except within those areas over which the entity does not have jurisdiction. Such areas include, but are not limited to:
 - Highway 99 and Highway 145, included in Caltrans Phase 1 permitting.
 - School Districts and Colleges, including Madera Unified School District and Madera Community College of the State Center Community College District, which are required to prepare a separate SWQMP under Phase 2.
 - The Madera Fairgrounds, required to prepare a separate SWQMP under Phase 2.
 - The City of Madera Airport, permitted under Phase 1.

Figure 3-1 shows the geographic areas covered by the SWQMP.



Section 4

Best Management Practices and Measurable Goals

Description of the Six Minimum Measures

The SWQMP will implement a program designed to reduce the discharge of pollutants from storm drain systems of the City of Madera to the “maximum extent practicable” to protect water quality.

As required under the Phase II NPDES General Permit, the SWQMP will address the six “Minimum Control Measures” that are described in general in Section 2, and described in more detail below.

For each of these six Minimum Control Measures there are BMPs and associated Measurable Goals that will be implemented during the course of the permit term. It is through the implementation and evaluation of these BMPs and Measurable Goals that the City will ensure that the objectives of the Phase II NPDES Program will be met within the permit boundary.

A more detailed discussion of the Minimum Control Measures, and why they are necessary, is provided below.

1. Public Participation/Involvement

What is Required?

To satisfy this minimum control measure, the operator of a regulated small MS4 must:

1. Comply with applicable State, and local public notice requirements; and
2. Determine the appropriate BMPs and measurable goals for this minimum control measure.

Why is it Necessary?

EPA believes that the public can provide valuable input and assistance to a regulated small MS4's municipal storm water management program and, therefore, suggests that the public be given opportunities to play an active role in both the development and implementation of the program. An active and involved community is crucial to the success of a storm water management program because it allows for:

1. Broader public support since citizens who participate in the development and decision making process are partially responsible for the program and, therefore, may be less likely to raise legal challenges to the program and more likely to take an active role in its implementation.
2. Shorter implementation schedules due to fewer obstacles in the form of public and legal challenges and increased sources in the form of citizen volunteers.
3. A broader base of expertise and economic benefits since the community can be a valuable, and free, intellectual resource.
4. A conduit to other programs as citizens involved in the storm water program development process provides important cross-connections and relationships with other community and government programs. This benefit is particularly valuable when trying to implement a storm water program on a watershed basis, as encouraged by EPA.

2. Public Education and Outreach

What is Required?

To satisfy this minimum control measure, the operator of a regulated small MS4 needs to:

1. Implement a public education program to distribute educational materials to the community, or conduct equivalent outreach activities about the impacts of storm water discharges on local water-bodies and the steps that can be taken to reduce storm water pollution.
2. Determine the appropriate BMPs and measurable goals for this minimum control measure.

Why is it Necessary?

An informed and knowledgeable community is crucial to the success of a storm water management program since it helps to ensure the following:

1. Greater support for the program as the public gains a greater understanding of the reasons why it is necessary and important. Public support is particularly beneficial when operators of small MS4s attempt to institute new funding initiatives for the program or seek volunteers to help implement the program.
2. Greater compliance with the program as the public becomes aware of the personal responsibilities expected of them and others in the community, including the individual actions they can take to protect or improve the quality of area waters.

3. *Construction Site Runoff Control*

What is Required?

The Phase II Final Rule requires an operator of a regulated small MS4 to develop, implement, and enforce a program to reduce pollutants in storm water runoff to their MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. The small MS4 operator is required to:

1. Have an ordinance or other regulatory mechanism requiring the implementation of proper erosion and sediment controls, and controls for other wastes, on applicable construction sites.
2. Have procedures for site plan review of construction plans that consider potential water quality impacts.
3. Have procedures for site inspection and enforcement of control measures.
4. Have sanctions to ensure compliance (established in the ordinance or other regulatory mechanism).
5. Establish procedures for the receipt and consideration of information submitted by the public.
6. Determine the appropriate BMPs and measurable goals for this minimum control measure.

Why is it Necessary?

Polluted storm water runoff from construction sites often flows to MS4s and ultimately is discharged into local rivers and streams. Of the pollutants listed in the table below, sediment is usually the main pollutant of concern. Sediment runoff rates from construction sites are typically 10 to 20 times greater than those of agricultural lands, and 1,000 to 2,000 times greater than those of forest lands. During a short period of time, construction sites can contribute more sediment to streams than can be deposited naturally during several decades. The resulting siltation, and the contribution of other pollutants from construction sites, can cause physical, chemical, and biological harm to The City's drainage system and waters of the U.S.

Pollutants Commonly Discharged From Construction Sites

Sediment
Solid and sanitary wastes
Phosphorous (fertilizer)
Nitrogen (fertilizer)
Pesticides
Oil and grease
Concrete truck washout

4. Illicit Discharge Detection and Elimination

What is Required?

Recognizing the adverse effects illicit discharges can have on receiving waters, the final rule requires an operator of a regulated small MS4 to develop, implement and enforce an illicit discharge detection and elimination program. This program must include the following:

1. A storm drainage system map, showing the location of all outfalls and the names and location of all waters of the United States that receive discharges from those outfalls.
2. Through an ordinance, or other regulatory mechanism, a prohibition (to the extent allowable under State, Tribal, or local law) on non-storm water discharges into the MS4, and appropriate enforcement procedures and actions.
3. A plan to detect and address non-storm water discharges, including illegal dumping, into the MS4.
4. The education of public employees, businesses, and the general public about the hazards associated with illegal discharges and improper disposal of waste.
5. The determination of appropriate BMPs and Measurable Goals for this minimum control measure.

Why is it Necessary?

Discharges from MS4s often include wastes and wastewater from non-storm water sources. A study conducted in 1987 in Sacramento, California, found that almost one-half of the water discharged from a local MS4 was not directly attributable to precipitation runoff. A significant portion of these dry weather flows were from illicit and/or inappropriate discharges and connections to the MS4. Illicit discharges enter the system through either direct connections (e.g., wastewater piping either mistakenly or deliberately connected to the storm drains) or indirect connections (e.g., infiltration into the MS4 from cracked sanitary systems, spills collected by drain outlets, or paint or used oil dumped directly into a drain). The result is untreated discharges that contribute high levels of pollutants, including heavy metals, toxics, oil and grease, solvents, nutrients, viruses, and bacteria to receiving waterbodies. Pollutant levels from these illicit discharges have been shown in EPA studies to be high enough to significantly degrade receiving water quality and threaten aquatic, wildlife, and human health.

5. Pollution Prevention/Good Housekeeping

What is Required?

Recognizing the benefits of pollution prevention practices, the rule requires an operator of a regulated small MS4 to:

1. Develop and implement an operation and maintenance program with the ultimate goal of preventing or reducing pollutant runoff from municipal operations into the storm drain system.
2. Include employee training on how to incorporate pollution prevention/good housekeeping

techniques into municipal operations such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and storm water system maintenance. To minimize duplication of effort and conserve resources, the MS4 operator can use training materials that are available from EPA, their State or Tribe, or relevant organizations.

3. Determine the appropriate BMPs and measurable goals for this minimum control measure.

Why is it Necessary?

The Pollution Prevention/Good Housekeeping for municipal operations minimum control measure is a key element of the small MS4 storm water management program. This measure requires the small MS4 operator to examine and subsequently alter their own actions to help ensure a reduction in the amount and type of pollution that: (1) collects on streets, parking lots, open spaces, and storage and vehicle maintenance areas and is discharged into local waterways, and (2) results from actions such as environmentally damaging land development and flood management practices or poor maintenance of storm drain systems. While this measure is meant primarily to improve or protect receiving water quality by altering municipal or facility operations, it also can result in a cost savings for the small MS4 operator, since proper and timely maintenance of storm drain systems can help avoid repair costs from damage caused by age and neglect.

6. Post-Construction Runoff Control

What is Required?

The Phase II Final Rule requires an operator of a regulated small MS4 to develop, implement, and enforce a program to reduce pollutants in post-construction runoff to their MS4 from new development and redevelopment projects that result in the land disturbance of greater than or equal to 1 acre. The small MS4 operator is required to:

1. Develop and implement strategies which include a combination of structural and/or non-structural BMPs.
2. Have an ordinance or other regulatory mechanism requiring the implementation of post-construction runoff controls to the extent allowable under State, Tribal or local law.
3. Ensure adequate long-term operation and maintenance of controls.
4. Determine the appropriate BMPs and measurable goals for this minimum control measure.

Why is it Necessary?

Post-construction storm water management in areas undergoing new development or redevelopment is necessary because runoff from these areas has been shown to significantly effect receiving waterbodies. Many studies indicate that prior planning and design for the minimization of pollutants in post-construction storm water discharges is the most cost-effective approach to storm water quality management.

There are generally two forms of substantial impacts of post-construction runoff. The first is caused by an increase in the type and quantity of pollutants in storm water runoff. As runoff flows over areas altered by development, it picks up harmful sediment and chemicals such as oil and grease, pesticides, heavy metals, and nutrients (e.g., nitrogen and phosphorus). These pollutants often become suspended in runoff and are carried to receiving waters, such as retention basins and streams. Once deposited, these pollutants can enter the food chain through small aquatic life, eventually entering the tissues of fish and humans. The second kind of post-construction runoff impact occurs by increasing the quantity of water delivered to the waterbody during storms. Increased impervious surfaces interrupt the natural cycle of gradual percolation of water through vegetation and soil. Instead, water is collected from surfaces such as asphalt and concrete and

routed to drainage systems where large volumes of runoff quickly flow to the nearest receiving water. The effects of this process include streambank scouring and downstream flooding, which often lead to a loss of aquatic life and damage to property.

Master Listing of BMPs and Measurable Goals

The EPA developed an extensive list of potential BMPs and Measurable Goals for all six of the Minimum Control Measures, and promulgated them through their website. The City has identified those BMPs and Measurable Goals that it believes would be most useful and effective in reducing the discharge of pollutants from storm drain systems within the geographic area covered by the SWQMP.

BMPs and Measurable Goals that will be Performed by the City of Madera

Using the Master List of BMPs and Measurable Goals, the City selected those that it believed would be the most effective within its jurisdiction. This selection process took into account a wide range of factors such as population size, storm system size and complexity, past experience in dealing with storm water pollution issues, and the availability of financial and manpower resources to implement the BMPs and Measurable Goals.

Table 4-1 contains the BMPs and Measurable Goals that the City has selected. This table shows which BMPs and Measurable Goals the City will perform, and also the time schedules for their performance. Some of the Measurable Goals consist of preparing plans that will then be implemented as a series of subsequent Measurable Goals. In those cases the plans that are developed will include a description of what these subsequent Measurable Goals are, along with a time schedule for their accomplishment. These plans will be submitted as part of the annual reports that are required by the General Permit.

It is the intent of the City to achieve, within the five-year cycle of the NPDES Permit, all of the Measurable Goals it has selected. In other words, over the five year period the total percentage of the Measurable Goal that is expected to be completed will be 100%.

SWQMP MANAGER

The SWQMP will be managed and overseen by the Director of Community Development/City Engineer. Each MCM has been assigned an individual manager who will be responsible for implementation of the BMPs listed under the associated MCM. The individual MCM Managers will ultimately report to the SWQMP Manager for regular progress updates and annual reporting information.

Please refer to Appendix C for the MCM Manager Assignment Chart.



Table 4-1
NPDES PHASE II PERMIT
Storm Water Quality Management Plan



Best Management Practices (BMPs)

MCM - 1: PUBLIC PARTICIPATION & INVOLVEMENT									
MCM OBJECTIVE	BMP NO.	BMP's	MEASURABLE GOALS	IMPLEMENTATION	IMPLEMENTATION SCHEDULE				
					YEAR 1 (July 1, 2004 - June 30, 2005)	YEAR 2 (July 1, 2005 - June 30, 2006)	YEAR 3 (July 1, 2006 - June 30, 2007)	YEAR 4 (July 1, 2007 - June 30, 2008)	YEAR 5 (July 1, 2008 - June 30, 2009)
The success of the SWQMP depends on securing support from City elected officials, citizens, business groups and City staff. To secure this support, the City will implement a plan that not only informs these audiences of the urban runoff concerns, but also asks them to participate in the development of the SWQMP. The initial step to provide a legal and ministerial basis for the SWQMP will be its incorporation into the City's General Plan. This process will include public noticing and public hearings to foster public participation and involvement, with the following objectives: 1) Raise public awareness about the drainage problems in Madera through public involvement in the SWQMP, 2) involve the public in the development and implementation of the SWQMP to secure public "buy in" and support for the SWQMP.	1-1	Public information meeting on January 7, 2003 to introduce the SWQMP and NPDES to the Public. Information introduced to public will be made in compliance with State and local requirements.	Completed on January 7, 2003	Responsibility of SWQMP Manager; Harris & Associates to assist City staff.	DONE				
	1-2	Public hearing to present and introduce the SWQMP to public. Information introduced to public will be made in compliance with State and local requirements.	Completed on March 5, 2003	Responsibility of SWQMP Manager. Harris & Associates will assist City staff for this meeting. This is the upcoming Council meeting when the NPDES Phase II permit application and the SWQMP are approved by City Council Resolution.	DONE	---	---	---	---
	1-3	Annual public hearing on report of progress of the SWQMP implementation. Public meetings will be held to encourage citizen participation and allow additional viewpoints to be considered for incorporation in subsequent modifications to the SWQMP. Information reported to public will be made in compliance with State and local requirements.	Complete prior to September 31st of indicated year (immediately following issuance of annual report to the RWQCB outlining progress of SWMP implementation). Ultimately the effectiveness of this BMP will be seen in an overall increased awareness of how the City and community is progressing in protecting water quality, and what measures will be taken the next year to forward this goal. The City will measure awareness of its citizens by selecting a random sample of City residents on the mailing list, and mailing them a feedback questionnaire. A measurable goal of 10% will be maintained for return of the questionnaires.	Responsibility of SWQMP Manager. This is to report to Council the progress (Measurable Goals) of the SWQMP and present the annual SWRCB progress report to City Council. Report may also be included with other Public Education outreach materials.	---	100%	100%	100%	100%

MCM - 1: PUBLIC PARTICIPATION & INVOLVEMENT									
MCM OBJECTIVE	BMP NO.	BMP's	MEASURABLE GOALS	IMPLEMENTATION	IMPLEMENTATION SCHEDULE				
					YEAR 1 (July 1, 2004 - June 30, 2005)	YEAR 2 (July 1, 2005 - June 30, 2006)	YEAR 3 (July 1, 2006 - June 30, 2007)	YEAR 4 (July 1, 2007 - June 30, 2008)	YEAR 5 (July 1, 2008 - June 30, 2009)
	1-4	Storm Drain Stenciling - The City will sponsor a volunteer storm drain stenciling program for any City-maintained storm drain structure. The City will also develop a storm drain structure stenciling standard. This standard will apply to both existing structures and new development. For new developments that have drain inlets the Developer/contractor will be required to stencil the inlet.	The goal is to stencil approximately 20% of the existing unmarked inlets per year throughout the 5 year permit program with 100% of inlets marked by the end of year 5. The effectiveness of this program will be measured by making an annual count of inlets stenciled and recording stenciled structures on a database map. Efforts will be focused first on inlets that outfall directly to surface waters, then on inlets that outfall into basins eventually discharging to surface waters, and lastly on inlets that outfall into terminal basins.	Storm drain stenciling will be done through various volunteer organizations, i.e., the Boy Scouts and environmental conscience groups.	20%	40%	60%	80%	100%
	1-5	Public Participation in development of Public Ordinances for construction, post construction, etc. Public hearings will be held as required to implemented required ordinances to allow input from the public and public participation. Ordinances will meet the General Municipal Permit requirements.	Complete as public ordinances are implemented in the years indicated in the respective BMPs: -Construction Ordinance by June 30, 2006 -Post-Construction Ordinance by June 30, 2007 -Illicit Discharge Ordinance by December 31, 2007	Responsibility of the SWQMP Manager	---	33%	66%	100%	---



Table 4-1
NPDES PHASE II PERMIT
Storm Water Quality Management Plan



Best Management Practices (BMPs)

MCM - 2 PUBLIC EDUCATION AND OUTREACH									
MCM OBJECTIVE	BMP NO.	BMP's	MEASURABLE GOALS	IMPLEMENTATION	IMPLEMENTATION SCHEDULE				
					YEAR 1 (July 1, 2004 - June 30, 2005)	YEAR 2 (July 1, 2005 - June 30, 2006)	YEAR 3 (July 1, 2006 - June 30, 2007)	YEAR 4 (July 1, 2007 - June 30, 2008)	YEAR 5 (July 1, 2008 - June 30, 2009)
The public education and outreach plan has the following objectives: 1) change public perception and attitudes toward the drainage problems in the City of Madera, 2) raise the public awareness about storm drainage pollution and its impact on the City of Madera water resources, 3) Educate the community about specific pollutant sources and what the public can do to reduce drainage pollution. 4) Seek out public involvement (volunteer groups) in pollution prevention programs.	2-1	Prepare a public education and outreach plan that stresses awareness and information about storm water pollution and the roles that the residential, school, City staff, business, industrial and commercial sectors of the community can play in improving the quality of storm water by reducing pollution. Information will be in compliance with State and local requirements.	Complete Plan by June 30, 2005, with outreach efforts defined, targeted to reach City residents, schools, businesses, and City Staff.	Responsibility of MCM - 2 Manager. Coordinate with County, County Fair District and School Districts. Plan will cover five audiences of the general public: Residential, schools, City staff, business, commercial and industrial Use current Grant funded projects for public education of disposal of oil and hazardous waste material.	100%	---	---	---	---
	2-2	Mass Mailing - The plan will include a Storm water quality message in existing flyers for distribution with utility billings.	The effectiveness of the mailers will be measured by selecting a random sample of City residents on the mailing list. These residents will be mailed a feedback questionnaire. A measurable goal of 10% will be maintained for return of the questionnaires. A questionnaire shall be developed by June 30, 2005.	Insert flyer catered to address storm water discharges. The flyer will be sent along with City's utility bill mailings. This mailing will go out to the entire City and will be printed in both English and Spanish. The City utility bill is mailed out to approximately 50,000 City residents on a monthly basis. Flyer design shall be developed by June 30, 2005, and included in a monthly bill on a annual basis beginning October, 2005 and will continue through 2006, 2007, 2008, 2009.	100%	100%	100%	100%	100%

MCM - 2 PUBLIC EDUCATION AND OUTREACH									
MCM OBJECTIVE	BMP NO.	BMP's	MEASURABLE GOALS	IMPLEMENTATION	IMPLEMENTATION SCHEDULE				
					YEAR 1 (July 1, 2004 - June 30, 2005)	YEAR 2 (July 1, 2005 - June 30, 2006)	YEAR 3 (July 1, 2006 - June 30, 2007)	YEAR 4 (July 1, 2007 - June 30, 2008)	YEAR 5 (July 1, 2008 - June 30, 2009)
	2-3	Storm Water Website - The plan will include the development of a storm water section on the City's website.	The effectiveness of the web page will be measured by a web counter recording the number of visitors to the page. The goal for this web page will be 10 hits per month for the 5-yr permit term. Website to be completed by June 30, 2005.	The IT Department manages the current website by contracting out website development. A link will be added to the current City website that directs the user to a page dedicated to the SWQMP. At a minimum, the web page shall include a background of the NPDES Phase II process, the six minimum control measures, the general permit, the notice of intent for the City the SWQMP, a map showing the permit boundary, and important deadlines for program implementation. As web page is developed over the term of the permit, it is intended to include public involvement aspects, such as photographs of semi-annual waterway cleanups.	100%	100%	100%	100%	100%
	2-4	Media Campaigns (with the County of Madera) - Multimedia campaigns and partnerships to target large sectors of the population.	The effectiveness of the media campaign will be measured by selecting a random sample of City residents on the mailing list. These residents will be mailed a feedback questionnaire. A measurable goal of 10% will be maintained for return of the questionnaires. Campaign plan & questionnaire shall be developed by June 30, 2005, with the questionnaire to be sent out in November of subsequent fiscal years.	Depending upon coordination with the County of Madera, the multimedia campaign may consist of billboards, advertisements as previews in movie theatres, and newspaper advertisements, etc. Campaign plan to be completed by June 30, 2005.	40%	100%	100%	100%	100%
	2-5	Implement the public education and outreach plan.	The plan will include specific educational materials (English and Spanish) to be made available and distributed by mail and the media (radio, newspaper) and involve coordination with the County, County Fair, and schools on an annual basis. Implement plan by June 30 of each year indicated.	Plan prepared per BMP 2-1 and completed June 30, 2005. Implementation of plan to begin the following FY.	---	100%	100%	100%	100%



Table 4-1
NPDES PHASE II PERMIT
Storm Water Quality Management Plan

Best Management Practices (BMPs)

MCM - 3: CONSTRUCTION SITE RUNOFF CONTROL									
MCM OBJECTIVE	BMP NO.	BMP's	MEASURABLE GOALS	IMPLEMENTATION	IMPLEMENTATION SCHEDULE				
					YEAR 1 (July 1, 2004 - June 30, 2005)	YEAR 2 (July 1, 2005 - June 30, 2006)	YEAR 3 (July 1, 2006 - June 30, 2007)	YEAR 4 (July 1, 2007 - June 30, 2008)	YEAR 5 (July 1, 2008 - June 30, 2009)
In the absence of appropriate management controls, construction sites can release significant amounts of sediments and other pollutants into a drainage system. The objective of the construction site runoff control plan is to provide the City with the ability to manage and control discharges from construction sites.	3-1	Prepare Storm Water Pollution Prevention Plan (SWPPP) Guidelines and address 6 requirements mentioned in GP Section D.2.d. Guidelines to be reviewed with and by construction representatives for input/participation.	Complete SWPPP Guidelines and BMP Standards by June 30, 2005. Measurable goal will be for 100% of all grading plans for construction sites =1 acre to follow SWPPP Guidelines and Standards (checked and enforced through the grading plan reviewers by June 30, 2007. Develop construction site BMP standards as part of the grading permit process, to be included in SWPPP. Applicable BMPs may include: 1. gravel blankets at access to construction sites 2. sand bags around drop inlets, catch basins, other inlets to waters of the State 3. silt fences 4. dust control 5. temporary drainage structures for construction, such as swales and ponds 6. other BMPs . . . Handout for development standards available at permit counter.	Development of SWPPP Guidelines for construction work in the City is the responsibility of the MCM-3 Manager. Guidelines will include the development of fees to make the SWPPP implementation self-financed.	100%	---	---	---	---

MCM - 3: CONSTRUCTION SITE RUNOFF CONTROL									
MCM OBJECTIVE	BMP NO.	BMP's	MEASURABLE GOALS	IMPLEMENTATION	IMPLEMENTATION SCHEDULE				
					YEAR 1 (July 1, 2004 - June 30, 2005)	YEAR 2 (July 1, 2005 - June 30, 2006)	YEAR 3 (July 1, 2006 - June 30, 2007)	YEAR 4 (July 1, 2007 - June 30, 2008)	YEAR 5 (July 1, 2008 - June 30, 2009)
	3-2	Prepare regulatory ordinance, including a fee system to finance City staff review of development SWPPP plans and inspection / enforcement. Ordinance will require erosion and sediment controls, and will address proper disposal/handling of non-sediment construction wastes to eliminate discharging into storm sewer system or receiving waters to ensure compliance to the extent allowable under State or local law. Contractor/developer will be required to submit NOI & SWPPP demonstrating the appropriate controls. Enforcement will be included in ordinance, using a stepped approach.	Complete ordinance by June 30, 2006. Ordinance will be completed after the SWPPP Guidelines are completed.	Preparation and submittal of ordinance for Council approval will be the responsibility of the MCM-3 Manager.	---	100%	---	---	---
	3-3	City Staff Education - Development & implementation of training program to educate City departments dealing in plan reviews and inspection with the new SWPPP Guidelines and enforcement procedures so that the staff will be well equipped to assess adequacy of proposed plan or site inspections.	Set up internal education training program including all applicable City departments: * Assign program coordinator by Mar '05 * Develop program outline by Dec '05 * Minimum one half-day classroom instruction by Jan '06 and one half-day field review of actual sites: - 100% applicable staff trained in both procedures and enforcement. - Tiered enforcement system in place, including: 1) fix-it ticket 2) notification of violation, and 3) fines * Second annual class by Sep 10, 2006 * Third annual class by Sep 10, 2007 * Fourth annual class by Sep 10, 2008	A feedback questionnaire or quiz will be administered at end of each class. Goal is to have 100% of participants with a passing score of >70% on exam.	---	100%	100%	100%	100%
	3-4	Develop and implement procedures for site plan review which incorporate consideration of water quality impacts. Implement site plan review. Developers required to submit NOI & SWPPP prior to local approval of construction documents.	100% site plans reviewed per new procedures addressing water quality impacts. 100% site plans =1 acre will require SWPPP and NOI as part of submittal procedures. Procedures developed by Oct '05, and implemented (reviewed per new procedures) by Jun '06.	Procedures for site plan review that include a review of water quality impacts through the implementation of the SWPPP and construction site BMP's to be developed and followed by plan checkers.	50%	100%	100%	100%	100%
	3-5	Develop inspection procedures/ inspection checklists for inspectors as part of procedures to inspect and enforce control measures.	Inspection procedures and checklist to be developed and utilized by 100% of inspection staff by January, 2006.	Prepare inspection procedures and checklist.	---	100%	100%	100%	100%

MCM - 3: CONSTRUCTION SITE RUNOFF CONTROL									
MCM OBJECTIVE	BMP NO.	BMP's	MEASURABLE GOALS	IMPLEMENTATION	IMPLEMENTATION SCHEDULE				
					YEAR 1 (July 1, 2004 - June 30, 2005)	YEAR 2 (July 1, 2005 - June 30, 2006)	YEAR 3 (July 1, 2006 - June 30, 2007)	YEAR 4 (July 1, 2007 - June 30, 2008)	YEAR 5 (July 1, 2008 - June 30, 2009)
	3-6	Develop procedures to identify priority sites for inspection and enforcement, to include prioritization checklist used by City staff. Sites with assigned ranking will be maintained in database.	100% inspected sites will be prioritized based upon size, use, and location, and ranked for inspection and enforcement. Sites will be maintained in a database. Prioritization, ranking, and database to be developed by January, 2006.	Develop a database of construction sites =1 acre, that require inspection as determined by site plan review process. Develop prioritization checklist, utilized by City staff, that will rank proposed construction sites within the database.	---	100%	100%	100%	100%
	3-7	Conduct storm water inspections and establish a tracking system for inspections and violations.	Tracking system developed utilizing ranking system database and stepped approach for enforcement by Jan '06. 100% sites =1 acre inspected and tracked beginning Jul '06. (See also BMPs 3-3 and 3-6)	Utilize database of ranked sites as tracking tool for inspections and violations.	---	100%	100%	100%	100%
	3-8	Conduct outreach to construction professionals during and after development of program.	During development of program, a workshop will be held targeting all contractors that have at one time submitted a building permit within the City (currently kept in a database) or who have performed public contracts. The workshop will aim to alert the construction professionals to what the inspector will be looking for and enforcing when they conduct their inspections. Workshop to be held before June 30, 2006. After development of program, outreach will be conducted through preconstruction meetings held for each project, and/or during development review committee (DRC) meetings. Outreach after program development begins FY 06/07. Goal will be to have 50% of all contractors listed in the City's database in attendance at the workshop held during development of the program.	City will develop a workshop outline covering what the new standards and procedures include for conducting site inspections, procedures, compliance measures, and issuing violations for non-compliance.	---	50%	100%	100%	100%
	3-9	Develop procedures for receipt and consideration of information submitted by the public. Establish a reporting/tracking system for submittal of public information, develop procedures for responding to information.	Database, log sheet and public complaint form developed by Jan '06. 100% of complaints reported will be input into database with current status noted.	Develop database, log sheet and public complaint form to track and report complaints or file reports.	---	100%	100%	100%	100%



Table 4-1 **NPDES PHASE II PERMIT** **Storm Water Quality Management Plan**



Best Management Practices (BMPs)

MCM - 4: ILLICIT DISCHARGE DETECTION AND ELIMINATION									
MCM OBJECTIVE	BMP NO.	BMP's	MEASURABLE GOALS	IMPLEMENTATION	IMPLEMENTATION SCHEDULE				
					YEAR 1 (July 1, 2004 - June 30, 2005)	YEAR 2 (July 1, 2005 - June 30, 2006)	YEAR 3 (July 1, 2006 - June 30, 2007)	YEAR 4 (July 1, 2007 - June 30, 2008)	YEAR 5 (July 1, 2008 - June 30, 2009)
<p>Inspections of urban drainage systems have shown that, in general, a high percentage of industrial and commercial establishments (auto shops, restaurants, etc.) have improper or illicit discharges to the urban drainage system. The illicit discharge detection and elimination plan for the City is required to address these discharges using the following general objectives: 1) prevent improper disposal of wastes through a program that combines education with provisions of alternative disposal options and incentives, and 2) control illicit discharges by conducting methodical field surveys/ investigations of the City drainage system to identify and eliminate existing improper physical connections.</p>	4-1	<p>Develop plan to detect and eliminate illicit discharges. Plan will identify staff to conduct screening investigations and follow-up. Illicit discharges investigated will include identifying illicit connections from sanitary sewers into storm system, as well as commercial and industrial discharges. Plan will also outline method for site prioritization, inspection, tracking, and enforcement, as well as source removal.</p>	<p>First draft completed by May 31, 2005.</p> <p>a. Staff assigned to conduct screening investigations</p> <p>b. Proposed schedule and procedures determined for identifying and prioritizing illicit connections</p> <p>Second draft completed by Sep 31, 2005.</p> <p>a. Approach developed to trace and eliminate illicit discharges/connections once connections or indicators of illicit discharges are identified (or as they are identified).</p> <p>b. Enforcement mechanism proposed for inclusion in ordinance described in BMP 4-2.</p> <p>Final plan completed by Dec 31, 2005.</p>	<p>Developing , implementing and enforcing the plan will be the responsibility of the MCM-4 Manager. The plan will address the entire City watershed.</p>	33%	100%	100%	---	---
	4-2	<p>Adopt ordinance to prohibit illicit non-storm water discharges and implement appropriate enforcement procedures and actions to the extent allowable under State or local law.</p> <p>Ordinance will address all of the 17 specific non-storm water discharges that are identified as significant contributors of pollutants to the City's storm system. (See also BMP's 4-6 & 4-7.)</p> <p>If an existing ordinance is to be enhanced, it will be reviewed for consistency with Phase II permit requirements, revised, drafted, and adopted.</p>	<p>Complete ordinance by December 31, 2007. Ordinance will be adopted after the plan to detect and eliminate illicit storm water discharges (BMP 4-1) is completed. Adopted ordinance and enforcement mechanism in place by June 2008. Enforcement will include a stepped approach, such as 1) education, 2) notification, 3) citation, and 4) fines.</p>	<p>Preparation and submittal of ordinance for Council approval will be the responsibility of the MCM-4 Manager.</p>	---	---	---	100%	---

MCM - 4: ILLICIT DISCHARGE DETECTION AND ELIMINATION									
MCM OBJECTIVE	BMP NO.	BMP's	MEASURABLE GOALS	IMPLEMENTATION	IMPLEMENTATION SCHEDULE				
					YEAR 1 (July 1, 2004 - June 30, 2005)	YEAR 2 (July 1, 2005 - June 30, 2006)	YEAR 3 (July 1, 2006 - June 30, 2007)	YEAR 4 (July 1, 2007 - June 30, 2008)	YEAR 5 (July 1, 2008 - June 30, 2009)
	4-3	Implement illicit discharge detection and elimination plan. Implementation to be achieved through prioritizing areas of concern based upon potential sources (e.g. failing septic, industrial facilities, illegal dumping, carpet cleaners and other mobile cleaners) after conducting a survey and/or inspection of all the City facilities, following plan inspection procedures, and following plan procedures developed to remove the source of the discharges.	Implement plan starting 7/01/08: a. Begin identification of illicit connections per inspection and prioritization procedures of plan b. Record findings on system map per procedures of plan c. Implement enforcement mechanisms as necessary to eliminate illicit discharges Complete implementation by 6/30/09: a. All existing illicit connections identified as prioritized b. System map showing known illicit connections completed c. Enforcement, tracking, and follow-up procedures in place	Responsibility of MCM - 4 Manager	---	---	---	50%	100%
	4-4	Develop hotline for reporting of illegal dumping and discovery of illicit connections by the public.	Hotline in place and advertised to public by 7/01/06. 100% of reports responded to, with each report assigned a priority, inspected, tracked, and enforced per illicit discharge detection and elimination plan procedures and schedule.	Determine hotline system and method for advertising hotline to public.	---	100%	100%	100%	100%
	4-5	Update Storm Water System map with watershed information for each major outfall.	a. Evaluate existing storm drain maps for data gaps b. Incorporate watershed information for each major outfall into storm drain maps Updated storm system maps complete by June 30, 2009.	The map updating is the responsibility of the MCM-4 Manager. The existing system map will be updated during the years the illicit and non-storm water discharge plans are implemented.	---	---	---	50%	100%

MCM - 4: ILLICIT DISCHARGE DETECTION AND ELIMINATION									
MCM OBJECTIVE	BMP NO.	BMP's	MEASURABLE GOALS	IMPLEMENTATION	IMPLEMENTATION SCHEDULE				
					YEAR 1 (July 1, 2004 - June 30, 2005)	YEAR 2 (July 1, 2005 - June 30, 2006)	YEAR 3 (July 1, 2006 - June 30, 2007)	YEAR 4 (July 1, 2007 - June 30, 2008)	YEAR 5 (July 1, 2008 - June 30, 2009)
	4-6	Develop plan to review 17 specific non-storm water discharges to identify which, if any, constitute a pollution source that should be prohibited or regulated. Review will include evaluation and identification of significant sources of pollutants from the following list of non-storm water discharges: 1. Water line flushing 2. Landscape irrigation 3. Diverted stream flows 4. Rising ground waters 5. Uncontaminated groundwater infiltration (as defined at 40 CFR Sec. 35.2005(20)) to separate storm sewers 6. Uncontaminated pumped ground water 7. Discharges from potable water sources 8. Foundation drains 9. Air conditioning condensation 10. Irrigation water 11. Springs 12. Water from crawl space pumps 13. Footing drains 14. Lawn watering 15. Individual residential car washing 16. Flows from riparian habitats and wetlands; and 17. Dechlorinated swimming pool discharges	Complete plan by June 30, 2006.	Developing of the plan will be the responsibility of the MCM-4 Manager. The plan will address all 17 specific non-storm water discharges.	---	100%	---	---	---
	4-7	Implement plan that evaluates and identifies which of the 17 specific non-storm water discharges are considered a pollution source, and submit report to Regional Board on evaluation and identification results, even if results yield no significant contributors.	Full implementation by July 2006, with evaluation and identification of significant sources of pollutants underway. First report of findings submitted to the Regional Board September 2007.	Implementing this plan will be the responsibility of the MCM-4 Manager. The plan development will be coordinated or made part of the illicit discharge plan (BMP 4-1)	---	---	100%	---	---
	4-8	Incorporate into Public Education and Outreach program outreach activities targeted to businesses and the public describing the hazards and repercussions of illegal discharges and improper disposal of waste.	Implement outreach efforts concerning illegal discharges and improper disposal of waste during Illicit Discharge Detection and Elimination Plan development, beginning October 2005. Goal is to have decreased number of illegal discharges and decreased reports of illegal dumping.	The public information BMP shall be made part of MCM - 2. The MCM - 2 and MCM - 4 Managers shall be responsible for the implementation of this BMP.	---	100%	100%	100%	100%

MCM - 4: ILLICIT DISCHARGE DETECTION AND ELIMINATION									
MCM OBJECTIVE	BMP NO.	BMP's	MEASURABLE GOALS	IMPLEMENTATION	IMPLEMENTATION SCHEDULE				
					YEAR 1 (July 1, 2004 - June 30, 2005)	YEAR 2 (July 1, 2005 - June 30, 2006)	YEAR 3 (July 1, 2006 - June 30, 2007)	YEAR 4 (July 1, 2007 - June 30, 2008)	YEAR 5 (July 1, 2008 - June 30, 2009)
	4-9	Train public employees on the administrative process for illicit discharge reporting, detection, and elimination.	100% applicable staff representatives trained by 12/31/07, including at least one person from: <ul style="list-style-type: none"> - Fire Department - Police Department - Public Works - Maintenance - Engineering - Building Inspection Dept. Training held annually by December 31st each year.	Determine representative public employees requiring training, and advertise the training as mandatory.	---	---	---	100%	100%



Table 4-1
NPDES PHASE II PERMIT
Storm Water Quality Management Plan

Best Management Practices (BMPs)

MCM - 5: POLLUTION PREVENTION AND GOOD HOUSEKEEPING									
MCM OBJECTIVE	BMP NO.	BMP's	MEASURABLE GOALS	IMPLEMENTATION	IMPLEMENTATION SCHEDULE				
					YEAR 1 (July 1, 2004 - June 30, 2005)	YEAR 2 (July 1, 2005 - June 30, 2006)	YEAR 3 (July 1, 2006 - June 30, 2007)	YEAR 4 (July 1, 2007 - June 30, 2008)	YEAR 5 (July 1, 2008 - June 30, 2009)
<p>A significant amount of urban pollutants is associated with street and road surfaces, parking lots, plazas, corporation yards, and other municipal facilities. The objective of this pollution prevention and good housekeeping plan is to identify, develop and implement good housekeeping procedures to address drainage pollutants associated with all City public facilities.</p> <p>An integral part of this plan shall include Haz-Mat incident policies and procedures.</p>	5-1	Develop operation and maintenance plans for wide range of City owned facilities stressing storm water pollution prevention / removal. Survey departments and facilities for activities that may contribute pollutants, develop and implement FPPP at municipal facilities.	Because of the extensive number and variation in facilities which require different operations and maintenance objectives, this plan will be developed in phases, each phase with a different implementation schedule. Complete all plans by June 30, 2008.	Implementation is the responsibility of the MCM-5 Manager. Each plan phase will be prepared as a combined maintenance practices / capital improvement program where necessary. Plans will address street cleaning, storm drain collection system and disposal system maintenance, hazardous material spill management and good housekeeping procedures for all City facilities including Corp. yard, swimming pool, parks, etc.	---	---	33%	66%	100%
	5-2	Implement operation and maintenance plan.	Complete implementation of all plans by December 2008.	Implementation is the responsibility of the MCM - 5 Manager.	---	---	---	---	100%
	5-3	Training of City Personnel: Develop and implement a training program for municipal employees on how to reduce or eliminate storm water pollution from their activities. Develop and conduct a training program for all applicable municipal staff, development of BMP's, and specific municipal procedures and BMP's. Develop an employee feedback system.	Training of personnel responsible in each plan area (7 ea) will be accomplished after completion of each plan phase. To be complete by 6/30/09. Training program and questionnaire developed by October 31, 2008. 50% of all plan area personnel will be trained by February 28, 2009, and 100% of all personnel will be trained by June 30, 2009. A questionnaire will be distributed at each training session to measure training effectiveness, with a goal of receiving feedback from 70% of personnel attending the training session.	This training BMP will be made part of MCM-5. Implementation will be the responsibility of the MCM -5 Manager.	---	---	---	---	100%

MCM - 5: POLLUTION PREVENTION AND GOOD HOUSEKEEPING									
MCM OBJECTIVE	BMP NO.	BMP's	MEASURABLE GOALS	IMPLEMENTATION	IMPLEMENTATION SCHEDULE				
					YEAR 1 (July 1, 2004 - June 30, 2005)	YEAR 2 (July 1, 2005 - June 30, 2006)	YEAR 3 (July 1, 2006 - June 30, 2007)	YEAR 4 (July 1, 2007 - June 30, 2008)	YEAR 5 (July 1, 2008 - June 30, 2009)
	5-4	Continue street sweeping program and assess effectiveness of program -- All Streets 2 X month; high use areas 1 X week, up to 3 X week	Assess existing program effectiveness. Evaluation to be completed by 6/30/08. The assessment will include: * interview street sweeping operators to determine if there are any obstacles to carrying out sweeping schedule, i.e., vehicles in the way, etc. *Determine if there are any equipment limitations that prevent the completion of sweeping schedules. * Perform field inspections of sweeper effectiveness; determine gutter build-up between sweepings to determine if streets are being swept at appropriate frequencies * Evaluate data and make appropriate changes to schedule. Note: Existing street sweeping program will continue throughout plan term.	Implementation is responsibility of MCM - 5 Manager.	---	---	---	100%	100%
	5-5	Continue existing leaf program and assess effectiveness of program -- 3 to 4 weeks every fall.	Assess existing program effectiveness. Evaluation to be completed by 6/30/08. The assessment will include: * Interview field personnel to determine obstacles to completing leaf pick-up program. *Determine if there are any equipment limitations that prevent the completion of the program. *Perform field inspections of leaf pick-up effectiveness; determine if leaves are being picked up in a timely fashion before onset of heaviest rain period. *Evaluate data and make appropriate changes to program. Goal will be to pick up 100% of affected streets, storm drains, and other facilities beginning in 2008, and continuing each year thereafter. Note: Existing leaf program will continue throughout plan term.	Implementation is responsibility of MCM - 5 Manager.	---	---	---	100%	100%

MCM - 5: POLLUTION PREVENTION AND GOOD HOUSEKEEPING									
MCM OBJECTIVE	BMP NO.	BMP's	MEASURABLE GOALS	IMPLEMENTATION	IMPLEMENTATION SCHEDULE				
					YEAR 1 (July 1, 2004 - June 30, 2005)	YEAR 2 (July 1, 2005 - June 30, 2006)	YEAR 3 (July 1, 2006 - June 30, 2007)	YEAR 4 (July 1, 2007 - June 30, 2008)	YEAR 5 (July 1, 2008 - June 30, 2009)
	5-6	Continue existing annual cleaning and maintenance of storm drains, pump stations, drainage facilities and catch basins.	Assess current program for effectiveness. Evaluation to be completed by 6/30/08. The assessment will include: * Interview operators to determine problem areas and equipment limitations. * Determine the frequency of cleaning. * Formalize cleaning schedule and make appropriate adjustments. Goal will be to clean 100% of all storm drains, pump stations, drainage facilities, and catch basins that require cleaning (such as siphon dip sections, tires from open channels, etc.) on an annual basis beginning in 2008 and continuing for each year thereafter, based upon established new schedule. Note: Existing annual cleaning and maintenance will continue throughout plan term.	Implementation is responsibility of MCM - 5 Manager.	---	---	---	100%	100%
	5-7	Conduct routine storm water inspections of municipal facilities as part of operation and maintenance plan. (See MCM-6 for methods of compliance assurance with long-term operations and maintenance of municipal facilities.)	Goal will be to have the database established by March 2007, with all facilities inspected on an annual basis thereafter, beginning in January 2009.	This BMP will be implemented by establishing a database to identify all existing facilities, used as a tool for inspection.	---	---	30%	30%	100%

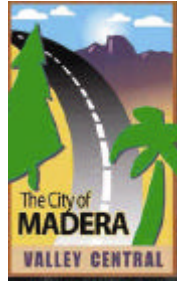


Table 4-1
NPDES PHASE II PERMIT
Storm Water Quality Management Plan

Best Management Practices (BMPs)

MCM - 6 : POST CONSTRUCTION RUNOFF CONTROL									
	BMP NO.	BMP's	MEASURABLE GOALS	IMPLEMENTATION	IMPLEMENTATION SCHEDULE				
					YEAR 1 (July 1, 2004 - June 30, 2005)	YEAR 2 (July 1, 2005 - June 30, 2006)	YEAR 3 (July 1, 2006 - June 30, 2007)	YEAR 4 (July 1, 2007 - June 30, 2008)	YEAR 5 (July 1, 2008 - June 30, 2009)
Two concerns are associated with new land development and significant re-development work. As communities grow, impervious surfaces replace natural ground and runoff peak flows as volumes increase, resulting in changes to the receiving bodies of water.	6-1	Develop Post-Construction Plan to prevent or minimize water quality impacts by storm water runoff from new development and redevelopment projects that disturb =1 acre (or <1 acre sites within larger developments) that incorporates the following: - Structural and non-structural BMP's, including BMPs contained in Attachment 4 (See 6-2) - Design standards, including design standards contained in Attachment 4 (See 6-2) - Long-term operations and maintenance requirements, both for municipal and privately owned controls (See 6-2) - Systems and procedures for tracking maintenance activities, for both municipal and private activities (See 6-3) - Inspections, including frequency and methods for measuring compliance (See 6-3) - Enforcement procedures for adherence to Design Standards, for proper implementation of BMPs and Design Standards on site, and for long-term operations and maintenance controls (See 6-6)	The goal of this BMP shall be to provide the framework for both staff and the public to implement, inspect, track, and enforce post-construction storm water runoff controls to the MEP performance standard. The plan, in its entirety, will be completed by March 31, 2007. The components of the plan, described in the following BMPs, will each have a set implementation schedule and associated measurable goal(s).	City will form a committee responsible for development of Post-Construction Plan. Oversight and direction of committee will be the responsibility of the MCM-6 manager. Committee meetings will be held regularly to check progress and direction to ensure overall consensus of all aspects of the Plan. Plan will include fees to make the implementation of this plan self-financed.	---	20%	100%	100%	100%

MCM - 6 : POST CONSTRUCTION RUNOFF CONTROL									
	BMP NO.	BMP's	MEASURABLE GOALS	IMPLEMENTATION	IMPLEMENTATION SCHEDULE				
					YEAR 1 (July 1, 2004 - June 30, 2005)	YEAR 2 (July 1, 2005 - June 30, 2006)	YEAR 3 (July 1, 2006 - June 30, 2007)	YEAR 4 (July 1, 2007 - June 30, 2008)	YEAR 5 (July 1, 2008 - June 30, 2009)
	6-2	Develop a Storm Water Criteria and BMP Standards Manual. Manual will describe technical criteria for selected design standards and control strategies (both structural and non-structural post-construction BMP's), including those contained in Attachment 4. Manual will provide guidance to developers, contractors, and owners for design, implementation, and long-term operations and maintenance of the control strategies. Manual will also serve as a tool for planning and public works departments for design review guidance, detailing post-construction requirements and conditions of approval.	Manual will be developed according to the following schedule: 1) Technical criteria for control strategies developed by June 30, 2006 2) Design standards and BMPs (control strategies) developed by December 2006 3) Guidance standards for design and implementation of control strategies developed by December 2006 4) Guidance standards for long-term operations and maintenance of control strategies developed by December 2006 5) Design review guidance for planning and public works staff incorporated into Manual by December 2006 Measurable goal will be for 100% of submitted plans to follow the design standards and BMPs as outlined in the Manual, with all design review staff utilizing the Manual and offering its contents as reference to the public.	Technical criteria for control strategies should look at amount impervious area within site, amount of runoff, proximity to receiving waters, pollutant loading from land-use, etc. Design standards, guidance standards and BMPs can be modeled after published standards from the RWQCB, CASQA, etc. Applicable BMPs may include: 1. Grassy swales for retention and filtration of area runoff 2. Drainage facilities to convey storm water to nearby detention basin 3. Downspout drainage collection 4. Other BMPs Design review guidance can incorporate design review checklists and procedures also found in published manuals and handbooks.	---	30%	100%	100%	100%
	6-3	Develop inspections procedures and methods for measuring and tracking compliance with post-construction BMPs per the approved development plans and specifications. Inspections will target on-site implementation of control strategies, and long-term operations and maintenance of control strategies once the controls are in place. Inspection procedures will apply to both municipal and private activities. Frequency of inspections will be determined as the procedures are developed, but will at a minimum, occur during construction (to ensure the BMPs shown in the approved plans are being constructed correctly), immediately after construction (to qualify for Notice of Termination), and at set times following construction (to ensure BMPs are operational and maintained as required).	Goal is to have procedures in place for staff to conduct inspections, and measure and track compliance both for implementation of controls and operations and maintenance of those controls to meet the MEP performance standard. Inspection procedures, database and logsheet to be developed by March 31, 2007. 100% of new and re-development sites to be inspected, logged, and tracked by June, 2007.	A database and inspection log sheet and procedure guidelines will be developed and maintained to track compliance with controls. Develop a database of all maintenance districts and structural BMP's for tracking municipal operations and maintenance of controls. Use database to track long-term maintenance activities.	---	---	100%	100%	100%

MCM - 6 : POST CONSTRUCTION RUNOFF CONTROL									
	BMP NO.	BMP's	MEASURABLE GOALS	IMPLEMENTATION	IMPLEMENTATION SCHEDULE				
					YEAR 1 (July 1, 2004 - June 30, 2005)	YEAR 2 (July 1, 2005 - June 30, 2006)	YEAR 3 (July 1, 2006 - June 30, 2007)	YEAR 4 (July 1, 2007 - June 30, 2008)	YEAR 5 (July 1, 2008 - June 30, 2009)
	6-4	<p>Train inspectors on inspection procedures, measurement of compliance, and tracking of sites both for implementation of controls and operations and maintenance of those controls to the MEP performance standard.</p> <p>Training will include all staff involved with maintenance of municipal controls.</p>	<p>Goals is to have 100% of inspection staff and staff involved with maintenance of controls trained on inspection procedures, and implementation, operations and maintenance of controls.</p> <p>Training to be conducted by June 30, 2007.</p>	Training of staff will be conducted through a minimum two-hour session held at City Hall.	---	---	100%	100%	100%
	6-5	<p>Develop, implement, and enforce an Ordinance to address post-construction runoff from new development and redevelopment projects to the extent allowable under State or local law by including the Design Standards contained in Attachement 4 of the General Permit.</p> <p>- Ordinance will include a fee system to finance review of development plans by City staff.</p> <p>- Ordinance will include an enforcement mechanism for non-compliance with the requirements set forth in the Storm Water Criteria and BMP Standards Manual and Post-Construction Plan.</p>	Adopt ordinance by June 30, 2007.	Preparation and submittal of ordinance for Council approval will be the responsibility of the MCM-6 Manager.	---	---	100%	100%	100%
	6-6	Establish a system and procedures for enforcement of violations, looking at adherence to Design Standards, proper implementation of BMPs and Design Standards on site per approved plans, and long-term operations and maintenance controls. Enforcement mechanism will be through the adopted ordinance.	Goals will be measured by tracking and enforcing non-compliance for all sites in violation of ordinance. System and procedures developed by 3/31/07. Tracking and enforcing after adoption of ordinance, beginning 7/1/07.	Violations will be logged and tracked in a database that is tied to the inspections database, since tracking of the violations will involve follow-up inspections.	---	---	70%	100%	100%
	6-7	Train department staff on the systems and procedures for enforcement of violations. Training will include inspection staff who record and diagnose compliance.	Training to be conducted by June 30, 2007. All department staff assigned to tracking and enforcing violations are to participate in training. Goal is to have 100% of violations tracked and enforced.	Training of staff will be conducted through a two-hour session held at City Hall.	---	---	100%	100%	100%

MCM - 6 : POST CONSTRUCTION RUNOFF CONTROL									
	BMP NO.	BMP's	MEASURABLE GOALS	IMPLEMENTATION	IMPLEMENTATION SCHEDULE				
					YEAR 1 (July 1, 2004 - June 30, 2005)	YEAR 2 (July 1, 2005 - June 30, 2006)	YEAR 3 (July 1, 2006 - June 30, 2007)	YEAR 4 (July 1, 2007 - June 30, 2008)	YEAR 5 (July 1, 2008 - June 30, 2009)
	6-8	<p>Conduct outreach and provide technical assistance to developers and designers.</p> <p>Outreach to developers and designers will be accomplished prior to a public hearing held for ordinance approval. Developers and designers will be invited to attend a workshop that will go over the main components of the Post-Construction Plan.</p> <p>Technical assistance will be provided through the guidance procedures outlined in the Storm Water Criteria and BMP Standards Manual. Specific details of the Post-Construction Plan will be included in plan check comments and design review committee (DRC) meetings.</p>	<p>Workshop will provide an overview of the Post-Construction Plan, and developers and designers will be encouraged to review the guidance procedures outlined in the Storm Water Criteria & BMP Standards Manual. Workshop to be held before the public hearing held for ordinance approval, by June 30, 2007.</p> <p>Measurable goal will be to have 100% compliance with the standards.</p>	<p>City will put out an announcement to the public inviting attendance and participation in the workshop. Announcement will include information on how to obtain the new Storm Water Criteria and BMP Standards Manual.</p>	---	100%	100%	100%	100%

Appendix A

State General Permit Waste Discharge Requirements for Storm Water Discharges from Small Municipal Separate Storm drain Systems (MS4s) (General Permit)

Appendix B

Glossary of Terms and Acronyms

Best Management Practices (BMPs) - Best management practices means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of ‘waters of the United States.’ BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Clean Water Act (CWA) - In 1972, the U.S. Congress adopted the Federal Water Pollution Control Act which created a comprehensive set of regulations for the protection of water quality throughout the United States. This legislation, which has been amended several times, has become more commonly referred to as the Clean Water Act. It is under this legislation that the EPA has put into place the Phase I and Phase II storm water NPDES programs.

Code of Federal Regulations (CFR) – The codified compilation of Federal Regulations covering a wide range of issues. The Phase I and Phase II storm water regulations are contained within the CFRs.

Environmental Protection Agency (EPA) – The U.S. government agency responsible for protection of the environment, and which develops and administers the storm water program regulations.

General Permit – The State’s NPDES permit that regulates storm water discharges from Small MS4s. The General Permit requires regulated Small MS4s (Permittees) to develop and implement a Storm Water Management Program (SWQMP) designed to reduce the discharge of pollutants to the Maximum Extent Practicable (MEP) and to protect water quality. The main goal of the General Permit is to require the development and implementation of a program that takes an interdisciplinary approach to storm water. The intent is that through such an approach, storm water quality impacts will be considered in all aspects of a municipality’s activities and that multiple departments within the municipality will work together to implement storm water BMPs.

Maximum Extent Practicable (MEP) - MEP is short for Maximum Extent Practicable. MEP is the technology-based standard established by Congress in CWA section 402(p)(3)(B)(iii) that municipal dischargers of storm water must meet. Technology-based standards establish the level of pollutant reductions that dischargers must achieve. MEP is generally a result of emphasizing pollution prevention and source control best management practices (BMPs) primarily (as the first line of defense) in combination with treatment methods serving as a backup (additional line of defense). The MEP approach is an ever evolving, flexible and advancing concept, which considers technical and economic feasibility. As knowledge about controlling urban runoff continues to evolve, so does that which constitutes MEP. The way in which MEP is met varies between communities. The individual and collective activities elucidated in their Storm Water Management Program become their proposal for reducing or eliminating pollutants in storm water to the MEP.

Measurable Goal - Measurable goals are definable tasks or accomplishments that are associated

with implementing best management practices.

Minimum Control Measure - A minimum control measure is a storm water program area that must be addressed (best management practices implemented to accomplish the program goal) by all regulated Small MS4s. The following six minimum control measures are required to be addressed by the regulated Small MS4s: Public Education and Outreach on storm Water Impacts, Public Involvement/Participation, Illicit Discharge Detection and Elimination, Construction Site Storm Water Runoff Control, Post-Construction Storm Water Management in New Development and Redevelopment, and Pollution Prevention/Good Housekeeping for Municipal Operations.

City of Madera Storm Water Quality Management Program (SWQMP) – The City’s Storm Water Management Program.

NPDES - National Pollutant Discharge Elimination System. Under this program the EPA issues permits under Section 402 of the federal Clean Water Act. The Regional Water Quality Control Boards has been delegated the authority to issue and administer the Phase I and Phase II storm water NPDES permits.

New Development- means land disturbing activities; structural development, including construction or installation of a building or structure, creation of impervious surfaces; and land subdivision.

Offsite Facility - An offsite facility is a geographically non-adjacent or discontinuous site that serves, or is secondary to, the primary facility and has the same owner as the primary facility. Storm water discharges from an offsite facility must be permitted if it meets the definition of a regulated Small MS4 itself. The offsite facility may satisfy this permitting requirement if the SWQMP of the primary facility addresses the offsite facility, such that the permitted area of the primary facility includes the offsite area.

Outfall - A point source where a municipal separate storm drain discharges to waters of the United States and does not include open conveyances connecting two municipal separate storm drains, or pipes, tunnels or other conveyances which connect segments of the same stream or other waters of the United States and are used to convey waters of the United States. (40 CFR §122.26(b)(9))

Phase I and Phase II NPDES Programs – The two phases of EPA’s storm water regulations. The Phase I regulations apply to municipal separate storm drain systems (MS4s) generally serving populations of 100,000 or greater, construction activity disturbing 5 acres of land or greater, and ten categories of industrial activity. The Phase II regulations apply to MS4s serving smaller populations within “urbanized areas” as defined by the U.S. Census Bureau with a population of greater than 1000 person per square mile, and construction activity disturbing 1 acres of land or greater.

Point Source - Any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff. (40 CFR §122.2)

Redevelopment - Redevelopment includes, but is not limited to: the expansion of a building footprint or addition or replacement of a structure; structural development including an increase in

gross floor area and/ or exterior construction or remodeling; replacement of impervious surface that is not part of a routine maintenance activity; and land disturbing activities related with structural or impervious surfaces. Where redevelopment results in an increase of less than fifty percent of the impervious surfaces of a previously existing development, and the existing development was not subject to these SWQMPs, the Design Standards apply only to the addition, and not to the entire development.

Regional Water Quality Control Board – The division of the SWRCB that administers and enforces water quality regulations within its region of the state. There are nine RWQCBs. The City of Madera is within Region 5, which is called the Central Valley Region RWQCB. The RWQCBs and their staff will oversee the State General Permit for the Phase II regulations. As appropriate, they will review SWQMPs and reports, require modification to SWQMPs and other submissions, impose region-specific monitoring requirements, conduct inspections, and take enforcement actions against violators of the General Permit.

Regulated Small MS4 - A regulated Small MS4 is a Small MS4 that is required to be permitted for discharging storm water through its MS4 to waters of the U.S., and is designated either automatically by the U.S. EPA because it is located within an urbanized area, or designated by the SWRCB or RWQCB in accordance with the designation criteria listed at Finding 11 of the General Permit.

Small Municipal Separate Storm drain System (Small MS4) - A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) that are: (i) Owned or operated by the United States, a State, city, town, boroughs, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or designated and approved management agency under section 208 of the CWA that discharges to waters of the United States. (ii) Not defined as “large” or “medium” municipal separate storm drain systems (iii) This term includes systems similar to separate storm drain systems in municipalities, such as systems at military bases, large hospital or prison complexes, and highways and other thoroughfares. The term does not include separate storm drains in very discrete areas, such as individual buildings. (40 CFR §122.26(b)(16))

Source Control BMP - means any schedules of activities, prohibitions of practices, maintenance procedures, managerial practices or operational practices that aim to prevent storm water pollution by reducing the potential for contamination at the source of pollution.

State Water Resources Control Board – The branch of State government responsible for protection of water quality, and which develops and implements policies for this purpose. The SWRCB developed the General Permit for use by entities that must be permitted under the Phase II storm water regulations.

Storm Water - Precipitation that does not infiltrate into the soil including material dissolved or suspended in it.

Storm Water Management Program (SWQMP) – A program that meets all the requirements of Section D of the State’s General Permit. The SWQMP shall reduce the discharge of pollutants from the regulated Small MS4 to the MEP and shall protect water quality. The SWQMP shall serve as

the framework for identification, assignment, and implementation of control measures/BMPs. The SWQMP shall be revised to incorporate any new or modified BMPs or measurable goals developed through the Permittee's annual reporting process. The SWQMP must describe the BMPs, and associated measurable goals that will fulfill the requirements of the six Minimum Control Measures described in Sections 2 and 4 of the SWQMP. The SWQMP must identify the measurable goals for each of the BMPs, including as appropriate, the months and years for scheduled actions, including interim milestones and the frequency of the action.

Structural BMP - means any structural facility designed and constructed to mitigate the adverse impacts of storm water and urban runoff pollution (e.g. canopy, structural enclosure). The category may include both Treatment Control BMPs and Source Control BMPs.

Treatment - means the application of engineered systems that use physical, chemical, or biological processes to remove pollutants. Such processes include, but are not limited to, filtration, gravity settling, media adsorption, biodegradation, biological uptake, and chemical oxidation and UV radiation.

Treatment Control BMP - means any engineered system designed to remove pollutants by simple gravity settling of particulate pollutants, filtration, biological uptake, media adsorption or any other physical, biological, or chemical process.



APPENDIX C
MCM Manager
Assignment Chart

CITY OF MADERA
SWQMP MANAGER



Anthony Docto, Jr.
Director of Community Development/City Engineer
(559) 661-5423

